A STUDY OF CHANGE IN CERTAIN PERSONALITY VARIABLES OF COUNSELORS IN TRAINING

By
FRED DUARD HOLT

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CHAPTER I

INTRODUCTION

In 1908 Frank Parsons opened his Vocational Bureau in Boston (7,59) and this event is often referred to as the beginning of the modern guidance movement. A number of developments have caused the growth of the profession to be both erratic and phenomenal. Several of these developments have been (a) the testing movement following World War I, (b) the psychoanalytic movement, (c) the emphasis on client centered counseling, and (d) the technological age. Since the first three factors listed above might easily be considered within the profession it seems appropriate at this time to discuss only some of the effects of the technological age.

During the last fifty years considerably greater advances have been made in the technological field than in the area of interpersonal relationships and human behavior. As these changes in technology have occurred the individual and society have been forced to make adjustments in the prevailing mode of living. Concomitant factors of technological change have been automation, geographical mobility of the population, increased leisure

time, and improved transportation and communication facilities.

The effect of these influences has been to focus attention on the need for trained personnel to work with various groups of people in our society. This increased awareness has been demonstrated by the upsurge of the establishment of mental health clinics, counseling or personnel centers in industry, and the increased demand for guidance departments in schools. The attention to school guidance has been intensified by the impact of Sputnik, Conant's report (12), and criticisms, such as those of Rickover (38). Representative of the degree of national interest in counseling and guidance is the inclusion of Title V in the National Defense Education Act of 1958 (8). This section established the authority under which the numerous guidance training institutes have been conducted.

The increasing emphasis on, and demand for, counseling and guidance services in the schools helps to bring many more people into the profession. The United States Department of Health, Education, and Welfare points out the personnel used in the report for 1960.

> Current statistics indicate that there is a current shortage of approximately 23,000 guidance and counseling personnel at the elementary school level, 20,000 at the secondary school level, and 2,200 at the undergraduate college level (42,18).

In accord with this estimate the Department also reports that the total equivalent full time counselors in the high schools has increased from an estimated 12,000 in 1957-1958 to 18,700 in 1960 (42,18). Therefore, it seems that as the number of persons entering the profession increases the educational programs for counselors will be more closely scrutinized both within and outside the profession. As the quality of the training programs is more carefully evaluated the individuals in the programs might also be subjected to more stringent selection procedures. Under these conditions it appears that the institutions will, of necessity, be obligated to assume responsibility for the selection procedures.

The apparent need for more adequate selection procedures in counselor education seems typified by recent statements by both the American Personnel and Guidance Association (2) and a group of counselor educators (37).

> Potential counselors may be identified during the undergraduate years, may be considered from among school faculties, from among recent college graduates, or from some other centers of experience. Multiple selection techniques must be used, including, assessment of academic background and graduate test results usually used in the graduate school; measures of non-cognitive factors; evaluative judgments of personal characteristics encompassing effectiveness in human relationships, sensitivity in communication relationships, professional attitudes and values, and a sincere commitment to human worth and potentiality (2,6).

Consistent with this statement is the report of the group of outstanding counselor educators.

> The program of selection should be based upon a broad concept of counselor competency and thus should involve multiple evaluation and selection techniques, including adequate potential promise, observable skills in human relations, good personal adjustment and evidence of professional attitudes and values. ... utilizing to the fullest the institution's resources for individual analysis and counseling (37,7).

These recent statements by responsible educators appear to emphasize the concern of the profession with basic selection procedures. But it seems that not only must multiple selection techniques be utilized but also that considerable attention should be directed toward the effects of counselor education programs on the personality of the counselor trainee. A number of authors (3;4;5;36; 41) have called attention to the importance of the personality of the counselor. Tyler (41) is explicit, in that she feels that success in counseling is more dependent upon the personal qualities of the counselor than upon techniques. Arbuckle is much more specific when he directs his attention to the apparent purpose of counselor education.

> The education of the counselor trainee must change him, it would seem, rather than increase his store of knowledge.... It might well be that the counselor educator should be more of a counselor than an educator (4,214).

Realistically, the personality change of counselor trainees cannot be the major focus of a counselor education program. But neither can the effects of a program on the personality of future counselors be ignored. It seems obvious that attention should be directed toward this consequence of the educational programs for counselors. This aspect of counselor education might well be a second focus of the program. Yates and Schmidt have directed a number of comments toward the possible internal aspects of a counselor education program and the possible effects of such an emphasis upon trainees.

> The potential counselor on entering training, like everyone else, has some sort of self concept which may in part be consciously definable and understood by the individual. In the process of training, this concept of self is modified, reinforced, accepted, or rejected. Many of the pressures, tensions, and anxieties felt by clients may also be experienced to a degree by the counselor in training (45,152).

Need for the Study

Counselor educators must, it seems, devote considerable time and effort to the task of assisting counselor aspirants toward personal growth and maturity. These people will not function in a vacuum but in a broad social context and should, it seems, possess the flexibility of personality necessary to adapt to situations

rather than to tasks. This ability to cope with situations and help others in their search for self-development and self-realization is not solely a matter of technique and skill but of qualities of warmth and understanding within the helper who is cognizant of his own weaknesses and limitations.

If, as previously stated, it is the responsibility of the counselor educator to assist the counselor aspirant in his growth, personal as well as academic, then it appears desirable that the educator know more about the relationship of personality variables and counselor qualities to the educational program. Three assumptions must be made if the foregoing statement is to be meaningful. First, it must be assumed that the variables of personality are discrete and measurable by some instrument at our disposal. Second, the counselor qualities of warmth, empathy, acceptance, and understanding are assumed to be desirable and are assumed to possess some relationship to the counseling function. (Studies by Fiedler (20) and others have indicated that these qualities are desirable and acceptable.) Third, and last, it must be assumed that there is a relationship between the effectiveness of a counselor and his degree of personality integration.

If meaningful information can be obtained about the effects of counselor education programs on the personality

of counselor trainees it seems that several important and cogent kinds of data might accrue. Through long range follow-up studies the degree of counselor success on the job might well be related to counselor personality profiles. The degree of personality modification during the educational program might be correlated with the ratings of the trainees by professional judges directed toward success as a counselor.

Purpose of the Study

The purpose of this study was to investigate changes in certain personality variables which occur within an individual during an intensive counselor education program. The changes studied were those which are reflected by the responses on the variables measured by the Edwards Personal Preference Schedule (15) and the Sixteen Personality Factor Questionnaire (9). The assumption was made that there exists a close relationship between the generally accepted counselor qualities of empathy, warmth, acceptance, and understanding and the particular factors named in the instruments used in the study.

The factors, Exhibition, Aggression, Affiliation, Intraception, Nurturance, Succorance, Cyclothymia, Confident-Adequacy, Self-Sentiment Formation, and Dominance, seem, on the basis of clinical observation, to relate to

the ability of the individual to function as a counselor. It was anticipated that some of these factors would show positive movement while others would show negative movement.

Hypotheses

Thorpe and Schmuller emphasize that the social order influences the every action of an individual and that personality must be considered and defined under the conditions of the social order.

> Tests have shown that personality is subject to change and that certain experiences can do much to bring about particular types of personality patterns (40,9).

The authors also point out that personality is very much subject to change and that these changes are measurable.

Combs and Snygg (11,145) have stated, "Wherever he is, whatever he does, the maintenance and enhancement of this self is the prime objective of his existence", thus indicating the direction of such changes. And yet, while some changes may not be in the direction of improved mental health, certain personality variables which are functional components of behavior could be altered by the individual in the direction of personal growth and maturity. The direction of change might be an increase in the degree of certain variables and a decrease in others.

The questions which this study was designed to answer are expressed by the following hypotheses:

1. Enrollees in an intensive counselor training program will change in certain personality variables. Changes which occur will be shown by the responses on the Edwards Personal Preference Schedule and the Sixteen Personality Factor Questionnaire.

   a. Positive movement is expected in the factors Affiliation, Intraception, Nurturance, Cyclothymia, Confident-Adequacy, and Self-Sentiment Formation.

   b. Negative movement will be expected in the areas of Exhibition, Succorance, Dominance, and Protension.

Definition of Terms

Certain terms used in the study appear to need clarification. The definitions presented have been derived from those given in the Manual for the Edwards Personal Preference Schedule (18) and the Sixteen Personality Factor Questionnaire (9).

1. Cyclothymia: The individual showing positive responses in this category tends to prefer occupations dealing with people. Highest ratings have appeared in the occupations of teaching and salesmanship.

2. Protension: In group dynamics experiments the protensive person usually rates as unpopular, and groups with a high average score are significantly less cohesive than groups with low scores. This kind of person is very often jealous, self-sufficient, suspicious, and irritable.

3. Confident-Adequacy: People scoring high in this dimension appear adequate to most life's problems, prefer people to books and quiet interests, and do not easily become downhearted and remorseful.

4. Self-Sentiment Formation: High scores on this factor are typical of the person who shows socially approved character responses, self-control, persistence, considerateness of others, and conscientiousness.

5. Dominance[1] (16 PFQ): Groups averaging high on this factor show more effective role interaction and democratic procedure than do low-scoring groups. The extremely high scores may be associated with assertiveness and with unconventional, tough, and attention getting characteristics.

6. Exhibition: This is characterized by the need to say clever things and to talk about personal adventures and experiences. It means also to have others notice and comment upon one's appearance, to be the center of attraction, and talk about one's personal achievements.

7. Affiliation: This is the need of an individual to form new friendships, participate with friends and to do things with friends.

8. Intraception: This is defined as the need to understand how others feel about problems, to analyze one's motives and feelings, and put one's self in another's place. In addition, it means the need to analyze others behavior and to judge others by why they do things rather than by what they do.

9. Succorance: This is characterized by the need to have others provide help when one is in trouble and to receive sympathy and understanding about personal problems.

10. Dominance[2] (EPPS): This is defined as the need to be a leader or to be regarded as a leader and to be able to make group decisions. It means also the need to persuade others and to direct the actions of others.

11. Nurturance: This is characterized by the need to help others, offer kindness and sympathy, and to be generous with others. In addition this is described as the need to show affection toward others and have them confide in one about problems of a personal nature.

Summary

As changes have occurred in our society the need for professional counseling and guidance has increased. Due to the demand for more people in the profession, attention has been focused on the selection procedures and the characteristics of those individuals entering the field. Little consideration has been given to the effects of counselor education programs on the personality of the trainees even though recognition has been made of specific counselor characteristics.

Certain qualities, such as warmth, empathy, understanding, and acceptance, have been assumed desirable in counselors and specific studies have been directed toward them. The purpose of this study was to determine if the education program would affect certain personality variables which seem to be closely related to those qualities.

CHAPTER II

REVIEW OF RELATED LITERATURE

During the 1940's a number of studies were conducted which focussed on the determination of counselor traits and characteristics. An excellent summary of these investigations is given by Jones (25,542). In his summary of the problem confronting the profession relative to the duties, characteristics, and preparation of counselors Jones states:

> The only thing of real importance is the development and selection of the successful counselor--not the courses taken or the specific requirements fulfilled. We must find some way by which the final product may be effectively appraised instead of depending, as now, upon more or less mechanical means and methods by which we think the successful counselor may be produced, ... One of the most important steps in this process is the selection of those who are admitted to the counselor training course. .... We feel sure that if the individual does not have the important personal characteristics at the time when he begins his specialized counselor training, or give promise of developing them more fully later, he is not a good prospect and should not be selected (25,560).

Then it would appear that those psychological components which comprise the personality of a counselor are of crucial importance. Within the counseling hour it is not the techniques or orientation of the counselor which is

the determinant of "success" but rather the ability, as Rogers (39) phrases it, for the counselor to be himself. Fiedler (20) has shown that the qualities of understanding and acceptance are of considerably more importance than orientation or technique. Therefore, it seems relatively safe to assume that certain elements of the personality might well contribute to the degree of effectiveness of a counselor as personified by the desirable qualities mentioned earlier.

Several authors have commented on the degree of counselor effectiveness and personality structure (6;13; 41;43). Weitz has stated that, "The counselor's personality traits and the ways in which he communicates these traits to his clients will determine his effectiveness as a counselor" (43,277).

Within the past decade Cottle has demonstrated his interest in the personality characteristic construct by his series of studies. In these studies several findings are worthy of consideration within the context of the present research. Cottle (14) found that college counselors differed significantly from college students on several scales of both the Guilford-Zimmerman Temperament Scale and the Minnesota Multiphasic Inventory. He also found that teachers and counselors could be differentiated in terms of attitudes (15).

Hardy (21) singled out the characteristic of dominance and attempted to determine its relationship to the non-directive technique. In her study of twenty-five subjects who were taking, or had taken, a course in non-directive counseling she was unable to prove or to disprove the hypothesis of a negative correlation between dominance and non-directiveness.

In his study of counselor characteristics and effective communication, Brams (6) found a positive relationship between tolerance for ambiguity and effective communication in counseling. These two studies raise the question of whether or not counselors might possibly possess a constellation of characteristics which is positively related to counselor effectiveness. Whether it is possible, objectively, to differentiate a special constellation of personality characteristics for counselors remains to be seen, but at the present time considerable research results seem to be suggesting that counselors are different from the general population.

Wrenn (44) conducted a study of his advisees in which he used the Allport-Vernon Lindsey Study of Values, the Guilford-Zimmerman Temperament Scale, and the Minnesota Multiphasic Inventory. He found that the men in the group were significantly higher than the norm group on the Theoretical scale of the Allport-Vernon-Lindsey Study of

Values and that the females were significantly higher on the Religious scale. Both men and women had median scores above the 75th percentile on the scales labeled Restraint, Emotional Stability, Friendliness, and Objectivity and Personal Relations on the Guilford-Zimmerman Temperament Scale.

Daane has pointed out certain significant relationships in his study of empathic ability and related variables. He defined empathy as "... as that ability which enables the counselor to put himself in the position of his client and predict his self-feelings and attitudes" (16,2096). In this study the researcher attempted to determine the degree of empathy of counselors through the use of the Index of Adjustment and Value. The degree of empathy was then related to the response patterns of the counselors on the Minnesota Multiphasic Personality Inventory and the Allport-Vernon-Lindsey Study of Values. Daane found that high empathy counselors scored higher on the Neurotic and Psychotic categories of the MMPI and higher on the Theoretical and Economic scales of the AVLSV.

Other researchers have engaged in the study of characteristics using large batteries of tests. The work of Abalos (1) in his comprehensive study of counselor characteristics is an excellent example. In this study ten different instruments were used to evaluate the

personality structure of 130 counselor trainees. From the data Abales concluded that few differences in general patterns of adjustment were apparent, but that differences did exist with respect to values, interests, and "characterological" aspects of the individual trainees. The researcher also found definite patterns and profiles which were distinct and different from the general population norms. Of especial significance was the finding that more or less promising trainees, as rated by two supervisors, presented significantly different profile patterns.

Kemp recently reported on the need structure, as measured by the Edwards Personal Preference Schedule, of school administrators, teachers, and counselors. He reported significantly different need structures between the three groups.

> Briefly stated, counselors differ significantly from principals and teachers in their need for exhibition, affiliation, and intraception. Teachers differ significantly from principals and counselors in their need for succorance and nurturance. Principals differ significantly from teachers and counselors in their need for achievement, endurance, and aggression (28,3).

Kemp secured his data from three groups of forty-five each secondary school principals, teachers, and counselors through use of the Edwards Personal Preference Schedule.

That teachers possess a characteristically different need structure from the general population is borne out in the study by Jackson and Guba (24). They investigated the need structure of 366 public school teachers in the Chicago area. Various needs, as assessed by the Edwards Personal Preference Schedule, were found to differ significantly from the normative groups reported in the manual.

> From the standpoint of need structure the qualities which seem to characterize teachers as a group are their high deference, orderliness, and endurance, and their low exhibition and heterosexuality (24,189).

It seems that further studies will tend to support this study in the light of the apparent relationship of these needs and the factors which are demonstrated by teachers in the conduct of their professional life.

In a study of nurse counselors, Kahook (26) found differences from the general population as determined by the Bernreuter Personality Inventory and the Rorschach Group Method. These findings were dominant tendencies, extroversion, and above average self-sufficiency on the Bernreuter and specific findings on the Rorschach which she considered characteristic of nurse counselors.

If these and other studies of professional people are considered in respect to counseling as a profession it becomes apparent that counselors, as recognized today, most probably possess a personality structure similar to

that of others in the social service occupations. This seems more logical when the aspect of "helping others" is considered relative to the functions performed by, for example, teachers, nurses, and counselors.

With the idea of relationships existing between the various professions and the current emphasis on the counseling profession another concern of major importance seems to be worthy of consideration - changes in counselors during the training period. During the past decade considerable emphasis has been placed on counselor characteristics, counselor effectiveness, orientation differences, effects of counseling, and the role of the counselor. But research directed toward the effect of counselor education programs on counselor personality has been lacking.

Munger and Johnson (32) used Porter's Test of Counselor Attitudes to investigate changes in twenty-eight Institute enrollees during a summer program. The eight-week program was divided into two parts — a six-week study of appraisal instruments, occupational and educational information, and a course in counseling; the remaining two weeks were spent in a practicum experience with high school students. Changes, significant at the .01 level, were found in the categories labeled value setting, understanding, and probing and diagnostic. The greatest change was found

during the first six weeks. A group of thirty-one teachers was used for a control group.

During an in-service training program Kirk (29) evaluated the techniques used in effecting attitudinal changes of ten counselors. She points out that feelings of threat prevented maximum progress but a final test of responses in varying counseling situations revealed a greater effort by the counselors to understand the student and his problem. The attitudinal changes were essentially positive and primarily in three areas, (a) understanding and acceptance of students, (b) an increased awareness of the complexity and breadth of counseling, and (c) an awareness of the responsibility of the counselor.

Clark (10) used the Minnesota Multiphasic Personality Inventory, Edwards Personal Preference Schedule, Guilford-Zimmerman Temperament Scale, Educational Interest Inventory, and an Opinionnaire for Counselors in a study of thirty Guidance Institute enrollees in a summer program. The study concentrated upon the changes during the program and also used a six-month follow-up.

Statistically significant changes were found in the response patterns on the Edwards in Affiliation, Heterosexuality, Exhibition, and Dominance; the Restraint scale on the Guilford-Zimmerman; and on the Opinionnaire for Counselors. But the author concludes:

> The number of statistically significant results could be accepted as due to chance at the .05 level when the total number of statistical results was considered; the inference appeared to be that no significant changes occurred in the response patterns of the trainees during or after the Institute (10,811).

Summary

For two decades researchers have sporadically investigated counselor traits and characteristics. Also, investigators have attempted to examine the characteristics of other groups, such as teachers, nurses, and administrators. These studies have indicated certain variations in the personality of the various groups.

A number of counselor educators have expressed interest in counselor characteristics, counselor effectiveness, and counselor qualities (6;13;20). But only a few researchers undertook the examination of changes in counselor trainees during the educational period. It appears that this is an area of vital concern which has been seriously neglected by professional counselor educators as indicated by the lack of research. Murphy states,

> There is just not enough attention being given to personality and interpersonal relationships, and a major reason is that so much attention is given to technical craft skills.... The skills should be ways of strengthening the personality and the interpersonal relationships. The skills should be ways of enabling the guide to function more humanly, more informally, more warmly, more effectively, through understanding the person more fully that he is guiding (34,10).

CHAPTER III

METHODS AND PROCEDURES

The original sample in this study consisted of 87 individuals, 49 males and 38 females, distributed in three groups. Efforts were made to secure approximately equal numbers of males and females in the primary control and secondary control groups as determined by the male-female ratio of the experimental group. But due to circumstances beyond the control of the researcher this equality was not entirely achieved. Eight subjects were dropped from the study because they did not return for the post testing. The distribution, by sex, of each group is shown in Table 1.

TABLE 1

Distribution of the Sample by Sex

Group	Pre-Test		Post-Test	
	Male	Female	Male	Female
Experimental	21	11	19	11
Primary Control	10	22	8	18
Secondary Control	18	5	18	5
Total	49	38	45	34

The experimental group consisted of the enrollees in an academic year long NDEA Counseling and Guidance Institute conducted by the Department of Personnel Services, College of Education, University of Florida. These students had been selected by a committee from the department and represented several geographical regions of the United States. All of the students had been admitted to the Graduate School of the University of Florida prior to their selection for participation in the Counseling and Guidance Institute.

Subjects for the primary control group were counselors and teachers who were drawn from several Florida counties and who had expressed their interest in guidance or were performing some guidance function in their schools. All of these people volunteered to participate in the study. Subjects in this group were employed at the elementary, junior high, and high school levels within the various counties.

The secondary control group was comprised of graduate students from the College of Agriculture and the College of Arts and Sciences of the University of Florida. The criteria for selection of participants in this group were (a) they must be engaged in study other than Education and (b) that this study must be at the graduate level. No individual in this group failed to return for the post testing.

The Instruments

The Edwards Personal Preference Schedule (18) and the Sixteen Personality Factor Questionnaire (9) were the instruments used in this study. These two tests were selected to provide relatively comprehensive coverage of several discrete categories of personality components. It was felt that these categories hold promise in the eventual identification of the qualities of counselors. Cottle has stated, "Interest inventories and structured personality inventories seem to offer a promising area of investigation in the identification of characteristics of counselors in various areas and at various levels within each area" (13,449).

The Edwards Personal Preference Schedule, hereafter referred to as the EPPS, is based on the manifest needs posited by Murray (33). It appears that to a considerable extent students and adults seek to satisfy these needs in their daily living. It further appears that several of these variables (needs) possess a relationship to those qualities of warmth, acceptance, empathy, and understanding which are assumed to be desirable in counselors. These needs are labeled Affiliation, Intraception, Nurturance, Exhibition, Succorance, and Dominance (18,11).

A basic feature in the design of the EPPS is the social desirability equivalence in the item choices. The author attempted to control the effect of social desirability as a causative factor in the choice of responses to the various items. The extent to which Edwards was successful in matching the statements for each item relative to the scale of social desirability is expressed by this statement.

> The extent to which this matching was successful is indicated by the intraclass correlation of .85 between the social desirability scale values of the paired statements making up the items (18, 22).

Klett (30) investigated the relationship of the social desirability scale values of the EPPS and the socio-economic status of high school students. He obtained a correlation of .94 with the work of Edwards on the social desirability scale. Klett also found no significant differences on the mean value of the social desirability of the items among the socio-economic groups studied.

Havron and Stauffacher (35) used the EPPS in a study of student affiliate nurses to evaluate the usefulness of the instrument for counseling and guidance in the field of nursing. On the basis of their findings the authors conclude, "... the EPPS not only has eliminated the influence of social desirability at the item level, but has also considerably reduced its operation at the variable level" (35,442).

Edwards (18,19) reports reliability of the EPPS by two methods. Split-half reliability coefficients are shown to possess a range between .60 for Deference and .87 for Heterosexuality. Test-retest reliability coefficients show somewhat less range with different factors at the two extremes, Exhibition and Achievement with .74 and Abasement with .88.

The problem of validity on the EPPS creates a somewhat difficult but not untenable position. At this stage in the development of the instrument its validity, as such, is demonstrated by the correlations between the variables of the EPPS and the Taylor Manifest Anxiety Scale and the Guilford Martin Personnel Inventory (18,22).

The fifteen variables that the EPPS purports to measure are as follows: Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intraception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality, and Aggression. In addition, there is a consistency score scaled in such a manner that the researcher can, by inspection, recognize when the responses have departed significantly from chance expectancy (18,15).

The Sixteen Personality Factor Questionnaire used in this research, and referred to later as the 16 PFQ, differs significantly from the EPPS in that it is designed to assess personality variables as behavior. There are three

considerations which contribute to the usefulness of the 16 PFQ: (a) it is a factor analytic instrument, (b) it appears that research is demonstrating its various uses, and (c) it is one of four scales developed for use at various age levels (9,1). It also appears that this instrument possesses considerable potential for the study of personality characteristics of various groups within the context of establishing occupational profiles. The authors report, through the informational bulletins, on the work of several researchers concerned with the development of occupational profiles as established through the use of the 16 PFQ. Profiles have been developed on sixteen occupational groups, some with as many as eleven factors significantly different from the general population (22).

The authors present consistency coefficients of .71 to .93 on the reliability of the 16 PFQ but it seems appropriate to point out that they also state:

> Since it is desirable that the 16 PFQ have a good range, and discriminate, for example, among clinical cases as well as in industry and college, we have not aimed at the artificially high reliabilities to which some handbooks accustom their readers (9,3).

Validity coefficients for the 16 PFQ have been derived by two methods, (a) from the known factor loadings, and (b) by assuming that the items have no specifics in common and, as such, taking the square root of the

reliability coefficients. The validity coefficients, as obtained by these two procedures respectively, are between .73 and .96 and .84 and .96 (9,4). In computing these figures the authors combined forms A and B but also found that by calculating empirically for form A the estimate is very close on all factors of the instrument (9).

Karson (27) used the 16 PFQ in a study of military personnel and psychological maladjustment. He found the instrument sufficiently adequate to differentiate normals, anxiety-neurotics, and general medical and psychosomatic groups. The normals were found to differ from the anxiety-neurotics on twelve of the sixteen factors; normals differed from "somatizers" at the .01 level on seven of the sixteen factors.

In a study of alcoholics by DePalma and Clayton (17) a number of factors were found to differentiate non-alcoholics and alcoholics. They found that alcoholics differed significantly from the general male population on fourteen of the sixteen factors. Ten of the factors were significant at the .001 level as determined by the use of a two-tailed "t" test of significance.

The sixteen personality factors which the 16 PFQ is designed to assess are as follows: "A", Cyclothymia versus Schizothymia; "B", General Intelligence versus Mental Defect; "C", Emotional Stability versus Emotionality;

'E', Dominance versus Submission; "F", Surgency versus Desurgency; "G", Character versus Lack of Rigid Internal Standards; "H", Parmia versus Threctia; "I", Premsia versus Harria; "L", Protension versus Relaxed Security; "M", Autia versus Praxernia; "N", Shrewdness versus Naivete; "O", Guilt Proneness versus Confident Adequacy; "Q_1", Radicalism versus Conservatism of Temperament; "Q_2", Self-Sufficiency versus Group Dependency; "Q_3", High Self-Sentiment versus Poor Self-Sentiment; and "Q_4", High Ergic Tension versus Low Ergic Tension (9,11-19).

Test Administration

Each of the two instruments used in this study was administered to each group in a pre- and post-test sequence with an intervening time lapse equivalent to one academic semester. The experimental group was tested at the beginning and end of the first academic semester. During the testing sessions efforts were made to maintain a high degree of rapport while adhering to the prescribed administration procedures. Neither of these tests have specific time limits but the authors suggest reasonable limits. All of the groups in this study finished within the suggested time.

The answer sheets were hand scored by the researcher. It should be noted that all precautions were taken to protect the identity of the participants in this research study.

The Experimental Variables

Certain factors are present in any educational program and it seems that in a counselor education program the influence of these factors would be of considerable importance. Within the educational program to which this study is related, these factors seem to exert influence which is conducive to personality revision insofar as the individual is capable and willing to attempt it. In addition to the emphasis on self-discovery, the client (student) centered approach of the staff seems to afford the individual student both the opportunity and responsibility to effect changes which he feels desirable and necessary.

Consequently, the experimental variables in the study were (a) the philosophical orientation of the staff, (b) the emphasis on perceptual psychology, and (c) the attention directed toward self-discovery and understanding.

Since the purpose of the study was to determine the change in certain personality variables of counselors-in-

training it was assumed that certain variables would be more susceptible to change than others. This assumption was predicated on the apparent relationship of certain factors of personality to those personal qualities assumed to be desirable in counselors.

Based on these assumptions, positive changes (movement) were expected in the factors Cyclothymia, Confident Adequacy, Self-Sentiment and in the needs Affiliation, Intraception, Nurturance. Negative movement was expected in the factors Dominance and Protension and in the needs labeled Exhibition, Succorance, and Dominance. Similar changes were not expected to occur within the two control groups.

Treatment of the Data

The data in this study consist of the pre- and post-test scores of three groups of people comprising the total sample. For purposes of this study only those series of scores which were directly applicable to the hypotheses were treated statistically. In an effort to obtain the greatest value from the scores, an analysis of variance technique was used (19; 31). This procedure permitted, and facilitated, several comparisons: (a) between groups, (b) between tests, and (c) the effects of interaction. In addition, means were computed for each group on each test

and have been included in Table 2, Chapter IV.

Summary

Three groups comprised the total sample of seventy-nine people who participated in the study. The enrollees in an NDEA Counseling and Guidance Institute comprised the experimental group. The primary control consisted of individuals on the job in various schools of Florida and the secondary group was composed of graduate students in other colleges of the University of Florida.

Two standardized tests, the EPPS and the 16 PFQ, were administered to each group twice with an interval of approximately 120 days or one academic semester. The scores on the variables Affiliation, Exhibition, Intraception, Succorance, Dominance, and Nurturance, as measured by the EPPS, and Cyclothymia, Protension, Dominance, Confident-Adequacy, and Self-Sentiment Formation, as measured by the 16 PFQ, were treated by an analysis of variance technique. This technique permitted an examination of differences between groups, between tests, and interaction. The degree of interaction was crucial in that it signified change in the variable which could be considered significant.

CHAPTER IV

ANALYSIS, FINDINGS, AND DISCUSSION

The data collected in the study consist of the scores on the two tests from two administrations spaced approximately one academic semester apart. For purposes of the study only those scores were processed which were directly related to the hypotheses.

In an effort to secure the utmost value from the data an analysis of variance technique was used to treat the scores. This procedure permitted the researcher to make several comparisons, (a) the experimental group and the primary control group, (b) the experimental group and the secondary control group, and (c) the primary control group and the secondary control group. And also, there were F ratios for between groups, between tests, and interaction for the various groups on each variable. The interaction F ratio was used to support the hypothesis of change.

Means were computed for each group on each test and are presented in Table 2 of this chapter. The data in Tables 3 through 17 were obtained from the responses of the participants to the items on the Sixteen Personality Factor Questionnaire.

TABLE 2

Means for all Groups, both Tests

Variable	Experimental T_1*	Experimental T_2**	Primary Control T_1*	Primary Control T_2**	Secondary Control T_1*	Secondary Control T_2**
Cyclothymia	11.16	12.06	11.31	11.31	7.26	6.17
Dominance***	15.60	15.17	12.92	12.69	14.78	15.17
Protension	4.70	4.13	6.77	6.73	7.43	7.73
Confident-Adequacy	7.10	8.00	9.62	9.62	8.17	7.43
Self-Sentiment Formation	10.06	9.63	10.42	10.96	10.39	10.87
Exhibition	11.43	12.96	12.58	14.04	13.04	13.48
Affiliation	15.43	17.20	17.00	17.46	12.48	12.74
Intraception	19.60	21.60	20.12	19.27	16.74	15.61
Succorance	10.50	10.93	12.69	11.50	8.65	8.91
Nurturance	15.27	15.83	18.23	16.53	13.60	13.13
Dominance	16.87	16.33	14.38	14.53	16.13	15.96

*T_1 = Pre-test

**T_2 = Post-test

***This variable is later referred to as Dominance[1] (measured by the 16 PFQ).

Cyclothymia (warmth)

The findings in Table 3 demonstrate the application of the F test to the data obtained from the experimental and primary control groups on the variable labeled Cyclothymia.

TABLE 3

Analysis of Variance Data for the Experimental and Primary Control Groups on the Variable Cyclothymia

Source	Sums of Squares	df	Mean Square	F Ratio	P
Between Groups	2.66	1	2.66	*	**
Between Tests	6.51	1	6.51	2.14	NS
Interaction	9.49	1	9.49	3.12	NS
Within Groups	826.76	54	15.31		
Within Tests	164.50	54	3.04		
Total	1009.92	111			

* F ratios of less than 1.00 are not shown in the tables.

** The level of confidence is indicated for those F ratios reaching or exceeding the required value for the level shown.

An F ratio of 4.06 or greater is required for significance at the .05 level based on 1 degree of freedom in the numerator and 54 degrees of freedom in the denominator. Examination of Table 3 makes it readily apparent

that no significant findings were obtained between the experimental and primary control groups on the variable Cyclothymia.

The findings in Table 3 indicate that these two groups did not differ significantly on any of the three sources of variation. Apparently, these two groups resemble each other in their degree of Cyclothymia (warmth), which is indicative of a liking for and a desire to be sociable with people. This similarity between the experimental and primary control groups seems to point out that, generally, people in education have a behavioral characteristic demonstrated in the desire to work with people rather than with things. Teachers have obtained the highest ranking in this factor while electricians and research physicists have the lowest (9,11).

It is probably a matter of general agreement that counselors and counselor trainees should possess a high degree of Cyclothymia to be most effective. Counselors lacking in warmth for people would likely find it very difficult to obtain sufficient rapport with counselees and, also, it would seem to tend to advise rather than counsel.

The findings in Table 4 appear to additionally support the premise that a greater degree of Cyclothymia

in found in individuals working with people compared to those not working with people.

TABLE 4

Analysis of Variance Data for the Experimental and Secondary Control Groups on the Variable Cyclothymia

Source	Sums of Squares	df	Mean Square	F Ratio	P
Between Groups	624.98	1	624.98	43.34	.001
Between Tests	.04	1	.04		
Interaction	25.69	1	25.69	10.35	.01
Within Groups	735.51	51	14.42		
Within Tests	126.27	51	2.48		
Total	1512.49	105			

The difference between groups produced an F value of 43.34 that is significant at the .001 level. From this it must be assumed that these two groups were very different when considered on the degree of Cyclothymia. Since the mean square for between tests was less than unity the F ratio was not computed. The F ratio for interaction of 10.35 is significant at the .01 level. The direction of change in Cyclothymia scores was different for the experimental and secondary control groups; the experimental S's Cyclothymia scores increased over time

whereas the secondary control S's scores decreased over time. The primary control made no change.

That these two groups, experimental and secondary control, differ could be expected since the experimental group was composed of individuals in fields of study not related to education. The warmth and sociability necessary for working with people is not as great in many fields of endeavor as in counseling.

In further support of the group difference between people in education and those not in education are the findings presented in Table 5. The F ratio between the

TABLE 5

Analysis of Variance Data for
the Primary and Secondary Control Groups
on the Variable Cyclothymia

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	514.29	1	514.29	32.10	.001
Between Tests	6.37	1	6.37	2.88	NS
Interaction	11.07	1	11.07	5.01	.05
Within Groups	752.91	47	16.02		
Within Tests	104.06	47	2.21		
Total	1388.70	97			

primary control and the secondary control groups relative to group differences is 32.10 which is significant at the .001 level for 1 degree of freedom in the numerator and 47 degrees of freedom in the denominator.

The F ratio of 2.88 between tests is not significant. But the interaction F ratio of 5.01 is significant at the .05 level. This significant finding lends support to the finding reported above between the experimental and secondary control groups and the experimental and primary control groups on interaction. It must be assumed that factors operative in the conditions of the secondary control group were effective in contributing to the negative movement demonstrated by this group and, further, that these unknown factors possibly affected the degree of interaction as found in the analysis.

From the findings reported in Tables 3, 4, and 5 which present the data for the three groups on the variable Cyclothymia several conclusions appear warranted. Within the limits imposed by the sample there are significant differences between people committed to education as a career and those people not in education. This difference in Cyclothymia is shown by the significant F ratios obtained between the experimental and secondary control groups and the primary control and secondary control groups.

Since Cyclothymia is the variable which is defined as warmth and sociability it seems that communication between people would be greatly effected by the degree of Cyclothymia. In the realm of counseling, communication is essential, whether it is verbal or non-verbal, for the establishment of rapport. In addition, the high school counselor must establish a working relationship with teachers, parents, and the principal. And if he does not possess a sufficient degree of warmth for people it seems doubtful if he can be an effective counselor.

Dominance[1]

That the experimental group differed from the primary control group is shown by the analysis of variance data in Table 6. This difference was in Dominance[1], as measured by the 16 PFQ, and was significant at the .05 level with 1 degree of freedom in the numerator and 54 degrees of freedom in the denominator. The experimental group appears to possess a higher degree of Dominance[1] than the primary control group. This variable is not consistent with dominance as measured by the EPPS. Dominance[1] is associated with more effective role interaction and with the practice of more democratic procedures (9,12).

TABLE 6

Analysis of Variance Data for
the Experimental and Primary Control Groups
on the Variable Dominance[1]

Source	Sums of Squares	df	Mean Square	F Ratio	P
Between Groups	184.80	1	184.80	6.52	.05
Between Tests	3.22	1	3.22		
Interaction	.29	1	.29		
Within Groups	1529.76	54	28.33		
Within Tests	180.99	54	3.35		
Total	1899.06	111			

No other significant findings are shown in Table 6. The between tests and interaction sources would, as may be noted, have obtained an F ratio less than unity had the computation been extended.

In the treatment of the data presented in Table 7 no significant differences were found between the experimental group and the secondary control group. In fact, the F ratios shown in both Table 7 and Table 8 are considerably below that value required for significance.

TABLE 7

Analysis of Variance Data for
the Experimental and Secondary Control Groups
on the Variable Dominance[1]

Source	Sums of Squares	df	Mean Square	F Ratio	P
Between Groups	4.27	1	4.27		
Between Tests	.13	1	.13		
Interaction	4.44	1	4.44	1.19	NS
Within Groups	1357.16	51	26.61		
Within Tests	190.43	51	3.73		
Total	1556.43	105			

TABLE 8

Analysis of Variance Data for
the Primary Control and Secondary Control Groups
on the Variable Dominance[1]

Source	Sums of Squares	df	Mean Square	F Ratio	P
Between Groups	114.99	1	114.99	3.21	NS
Between Tests	.09	1	.09		
Interaction	2.37	1	2.37		
Within Groups	1681.56	47	35.78		
Within Tests	126.04	47	2.68		
Total	1925.05	97			

Protension (suspecting)

On the variable labeled Protension the experimental group differed from the primary control group. The F ratio of 15.27 is significant at the .01 level for 1 degree of freedom in the numerator and 54 degrees of freedom in the denominator. No other significant findings were obtained.

TABLE 9

Analysis of Variance Data for the Experimental and Primary Control Groups on the Variable Protension

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	151.67	1	151.67	15.27	.01
Between Tests	2.71	1	2.71		
Interaction	2.12	1	2.12		
Within Groups	536.33	54	9.93		
Within Tests	185.17	54	3.43		
Total	878.00	111			

This variable might be expected to be different between people committed to education as a career and those not in education but it is difficult to comprehend a difference between two groups who have chosen education as a career. It is felt that possibly the selection process of choosing individuals from various schools

throughout the United States affected the response pattern of the experimental group. It is interesting that the experimental group were less suspicious and more accepting since they will be counselors on-the-job next year. Examination of Table 10 shows a significant difference between groups for the experimental and secondary control on the variable Protension. The findings of these two

TABLE 10

Analysis of Variance Data for the Experimental and Secondary Control Groups on the Variable Protension

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	261.70	1	261.70	21.38	.001
Between Tests	.94	1	.94		
Interaction	4.93	1	4.93	1.73	NS
Within Groups	624.73	51	12.24		
Within Tests	145.13	51	2.85		
Total	1037.43	105			

tables seem to indicate that the experimental group was selected from such a number of applicants that the group was an unusually accepting and understanding one. The primary and secondary control groups did not differ significantly between groups, between tests, or interaction.

TABLE 11

Analysis of Variance Data for the Primary and Secondary Control Groups on the Variable Protension

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	17.10	1	17.10	1.05	NS
Between Tests	.37	1	.37		
Interaction	.71	1	.71		
Within Groups	766.90	47	16.32		
Within Tests	164.92	47	3.51		
Total	950.00	97			

When the mean scores of the three groups are compared to the general population norms presented in the Supplement (23,66) it is found that the experimental group is 1 Sten value below the midpoint of the average range while the two control groups are within the range. It seems that the experimental group was an unusually relaxed, accepting, and trusting group of individuals. Considered in terms of counseling effectiveness this characteristic should contribute much to a counselor's understanding and acceptance of a counselee. It is difficult to envision a counselor with a high degree of Protension functioning effectively in the counseling relationship.

Confident-Adequacy (self-confidence)

Table 12 present the analysis of variance data for the experimental and primary control groups on Confident-Adequacy. The experimental group differs from the primary control group at the .01 level, based on 1 degree of freedom in the numerator and 54 degrees of freedom in the denominator. This variable is descriptive of the degree of self-confidence or the feeling one has of being able to cope with the rigors of an endeavor.

TABLE 12

Analysis of Variance Data for the Experimental and Primary Control Groups on the Variable Confident-Adequacy

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	118.83	1	118.83	9.61	.01
Between Tests	6.51	1	6.51	2.00	NS
Interaction	5.64	1	5.64	1.74	NS
Within Groups	667.66	54	12.36		
Within Tests	175.35	54	3.25		
Total	973.99	111			

No significant F ratios were obtained for the between tests and interaction of the experimental and primary control groups on the variable Confident-Adequacy.

The lack of any significant findings, as shown in Table 13, between the experimental and secondary control groups on Confident-Adequacy is noteworthy. This finding possibly indicates that people actively engaged in advanced study possess a greater degree of Confident-Adequacy than people not presently participating in active study. The F ratio of 5.02 for between groups, primary and secondary, is significant at the .05 level with 1 degree of freedom in the numerator and 47 degrees of freedom in the denominator.

TABLE 13

Analysis of Variance Data for the Experimental and Secondary Control Groups on the Variable Confident-Adequacy

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	5.79	1	5.79		
Between Tests	3.77	1	3.77	1.05	NS
Interaction	9.45	1	9.45	2.63	NS
Within Groups	795.85	51	15.60		
Within Tests	182.78	51	3.58		
Total	997.62	105			

TABLE 14

Analysis of Variance Data for the Primary and Secondary Control Groups on the Variable Confident-Adequacy

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	61.99	1	61.99	5.02	.05
Between Tests	.50	1	.50		
Interaction	.57	1	.57		
Within Groups	580.79	47	12.36		
Within Tests	103.43	47	2.20		
Total	747.28	97			

As shown by Table 14 there were no significant F ratios for the between tests and interaction of the primary and secondary control groups.

In considering the relationship of Confident-Adequacy to the counseling function several implications seem evident. It would seem that a counselor without adequate self-confidence would be unable to fully utilize the potential which he might possess. But how self-confident a counselor should be is not really known. At this stage of development of the profession it behooves each individual to strive to know and understand himself and assist others in the search for qualities, and their degree, which contribute to "success" as a counselor.

Self-Sentiment Formation (will-power)

Observation of Tables 15, 16, and 17 will show that no significant F ratios were obtained for the variable Self-Sentiment Formation.

TABLE 15

Analysis of Variance Data for the Experimental and Primary Control Groups on the Variable Self-Sentiment Formation

Source	Sum of Squares	df	Mean Square	F Ratio	F
Between Groups	19.76	1	19.76	2.97	NS
Between Tests	.01	1	.01		
Interaction	6.57	1	6.57	2.75	NS
Within Groups	359.23	54	6.65		
Within Tests	128.92	54	2.39		
Total	514.49	111			

TABLE 16

Analysis of Variance Data for
the Experimental and Secondary Control Groups
on the Variable Self-Sentiment Formation

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	15.86	1	15.86	2.17	NS
Between Tests	.04	1	.04		
Interaction	5.40	1	5.40	2.03	NS
Within Groups	371.37	51	7.28		
Within Tests	135.56	51	2.65		
Total	528.23	105			

TABLE 17

Analysis of Variance Data for
the Primary and Secondary Control Groups
on the Variable Self-Sentiment Formation

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	.09	1	.09		
Between Tests	6.38	1	6.38	2.80	NS
Interaction	.02	1	.02		
Within Groups	274.30	47	5.84		
Within Tests	107.10	47	2.28		
Total	387.89	97			

The data presented in Tables 18 through 35 were derived from the responses of the sample population to the items on the EPPS. These variables differ from those measured by the 16 PFQ in that they are based on manifest needs of the individual.

Exhibition

As shown by the analysis of variance data in Table 18, the experimental and primary control groups did not differ between groups on the need labeled Exhibition. But the between tests F ratio of 9.27 is significant at the .01 level based on 1 degree of freedom in the numerator and 54 degrees of freedom in the denominator. This finding indicates that both the experimental group and the primary control group differed between test one and test two. The meaning of this significant F ratio is not clear, other than both groups varied over the experimental period.

In the analysis of the data of the experimental and secondary control groups on the variable labeled Exhibition no significant differences were found. The F ratios were either less than unity or less than the value required for significance with 1 degree of freedom in the numerator and 51 degrees of freedom in the denominator.

TABLE 18

Analysis of Variance Data for
the Experimental and Primary Control Groups
on the Variable Exhibition

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	34.18	1	34.18	1.74	NS
Between Tests	63.00	1	63.00	9.27	.01
Interaction	.04	1	.04		
Within Groups	1062.68	54	19.67		
Within Tests	366.96	54	6.80		
Total	1526.86	111			

TABLE 19

Analysis of Variance Data for
the Experimental and Secondary Control Groups
on the Variable Exhibition

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	29.30	1	29.30	1.65	NS
Between Tests	29.58	1	29.58	5.86	NS
Interaction	7.86	1	7.86		
Within Groups	906.47	51	17.77		
Within Tests	412.56	51	8.09		
Total	1585.77	105			

The primary control group and the secondary control group were found to demonstrate a significant difference between tests on Exhibition. The F ratio of 5.88 is significant at the .05 level based on 1 degree of freedom in the numerator and 47 degrees of freedom in the denominator. No other significant findings were obtained for these groups on this factor as shown in Table 20.

TABLE 20

Analysis of Variance Data for the Primary and Secondary Control Groups on the Variable Exhibition

Source	Sum of Squares	df	Mean Square	F Ratio	F
Between Groups	.05	1	.05		
Between Tests	23.51	1	23.51	5.88	.05
Interaction	6.43	1	6.43	1.61	NS
Within Groups	859.95	47	18.30		
Within Tests	188.06	47	4.00		
Total	1078.00	97			

Affiliation

No significant difference was found between the experimental and primary control groups on the variable Affiliation. The F ratio of 1.02 does not reach the value required for significance. The F ratio of 4.34 for between

tests is significant at the .05 level based on 1 and 54 degrees of freedom. As previously indicated this finding specifies a difference between test one and test two without regard to groups. The F ratio of 1.36 for interaction is not significant.

TABLE 21

Analysis of Variance Data for the Experimental and Primary Control Groups on the Variable Affiliation

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	23.28	1	23.28	1.02	NS
Between Tests	37.72	1	37.72	4.34	.05
Interaction	11.86	1	11.86	1.36	NS
Within Groups	1238.71	54	22.93		
Within Tests	469.92	54	8.70		
Total	1781.49	111			

A significant difference was obtained between the experimental group and the secondary control group on the variable Affiliation, as shown in Table 22. The F ratio of 12.03 is significant at the .01 level with 1 degree of freedom in the numerator and 51 degrees of freedom in the denominator. This finding demonstrates a definite difference between the two groups on this variable. This

characteristic is found in individuals who like to do things with friends and prefers close associations.

TABLE 22

Analysis of Variance Data for the Experimental and Secondary Control Groups on the Variable Affiliation

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	357.99	1	357.99	12.03	.01
Between Tests	32.84	1	32.84	3.33	NS
Interaction	14.76	1	14.76	1.50	NS
Within Groups	1517.44	51	29.75		
Within Tests	502.90	51	9.86		
Total	2025.93	105			

The F ratios of 3.33 and 1.50 on between tests and on interaction, respectively, are not significant.

An F ratio of 16.13 was obtained between groups for the primary control group and the secondary control group on the variable Affiliation. This ratio is significant at the .001 level of confidence with 1 and 47 degrees of freedom. The primary control group differed significantly from the secondary control group in that they possessed a greater need for Affiliation as shown in Table 2, and further supported in Table 23. Based on the findings in

Tables 21, 22, and 23 it appears that people with a demonstrated interest in education, and counseling in particular, have a greater need for Affiliation than do people not in the field of education.

TABLE 23

Analysis of Variance Data for the Primary and Secondary Control Groups on the Variable Affiliation

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	521.44	1	521.44	16.13	.001
Between Tests	3.30	1	3.30		
Interaction	.26	1	.26		
Within Groups	1519.19	47	32.32		
Within Tests	209.44	47	4.45		
Total	2253.63	97			

The experimental and primary control groups did not differ between groups as is shown in Table 24. Also, there was no significant difference demonstrated between tests since the F ratio of 1.38 is considerably less than the value required for significance.

Intreception (to understand others)

As shown in Table 24 the F ratio of 7.35 for interaction on the variable Intreception is significant at the

.01 level with 1 and 54 degrees of freedom. The direction of change in Intraception scores was different for the experimental group and the primary and secondary control groups. The experimental S's scores increased over time while the primary control and secondary control S's scores decreased over time.

This aspect of personality appears to be of considerable importance for counselors if we accept the assumption that empathy is a desirable quality for counselors. The need Intraception is defined as, "...to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do,..." (18,11). If, as it appears, this variable is subject to change that deliberate efforts could possibly be made during the educational period to effect change. It would seem that an individual possessed of a relatively high need on this variable would also possess a concommitant high degree of understanding and empathy and through the operation of these abilities be more able to "perceive through the eyes of the counselee."

TABLE 24

Analysis of Variance Data for the Experimental and Primary Control Groups on the Variable Intraception

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	28.28	1	28.28		
Between Tests	9.14	1	9.14	1.38	NS
Interaction	48.77	1	48.77	7.35	.01
Within Groups	1697.68	54	31.44		
Within Tests	358.09	54	6.63		
Total	2141.96	111			

The treatment of the data for the experimental and secondary control groups produced an F ratio of 13.79 for between groups on the variable Intraception which is significant at the .001 level with 1 and 51 degrees of freedom. This finding specifies that these two groups differ significantly and were not drawn from the same population. This tends to support the thesis that people in education differ in manifest needs from the general population, and from non-education people in particular.

TABLE 25

Analysis of Variance Data for
the Experimental and Secondary Control Groups
on the Variable Intraception

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	533.39	1	533.39	13.79	.001
Between Tests	7.39	1	7.39		
Interaction	55.90	1	55.90	7.17	.05
Within Groups	1972.21	51	38.67		
Within Tests	397.71	51	7.80		
Total	2966.60	105			

No significant difference was found between tests for the experimental and secondary control groups on this variable. The F ratio of 7.17 for interaction is significant at the .05 level of confidence with 1 and 51 degrees of freedom.

TABLE 26

Analysis of Variance Data for
the Primary and Secondary Control Groups
on the Variable Intraception

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	302.15	1	302.15	7.16	.05
Between Tests	23.51	1	23.51	4.27	.05
Interaction	.49	1	.49		
Within Groups	1982.69	47	42.18		
Within Tests	259.00	47	5.51		
Total	2567.84	97			

As could be expected the F ratio of 7.16 between groups is significant at the .05 level for the primary and secondary control groups. This finding on Intraception further supports the difference found between the experimental and secondary control groups and discussed above. That people in education differ from those not in education on certain personality variables seems to be borne out by this finding.

The variance between tests is significant at the .05 level of confidence for 1 and 47 degrees of freedom. Other than pointing out that both groups differed from test one to test two the meaning of this significant finding is not clear. The F ratio for interaction is not significant.

Succorance (desiring help)

The analysis of variance data presented in Table 27 for the experimental and primary control groups shows no significant F ratios. In short, no significant differences were found between these groups on the variable labeled Succorance.

When the experimental and secondary control groups were compared it was found that the between group difference was significant at the .05 level of confidence with 1 and 51 degrees of freedom. From this finding, Table 28, it may be concluded that these two groups are composed of

TABLE 27

Analysis of Variance Data for
the Experimental and Primary Control Groups
on the Variable Succorance

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	60.98	1	60.98	1.92	NS
Between Tests	1.29	1	1.29		
Interaction	23.20	1	23.20	2.92	NS
Within Groups	1716.70	54	31.79		
Within Tests	423.51	54	7.84		
Total	2225.68	111			

TABLE 28

Analysis of Variance Data for
the Experimental and Secondary Control Groups
on the Variable Succorance

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	87.58	1	87.58	5.50	.05
Between Tests	5.89	1	5.89		
Interaction	.91	1			
Within Groups	1786.51	51	35.03		
Within Tests	636.70	51	12.48		
Total	2517.59	105			

individuals considerably different in the degree of need Succorance and this is further supported by the findings presented in Table 29.

TABLE 29

Analysis of Variance Data for the Primary and Secondary Control Groups on the Variable Succorance

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	267.99	1	267.99	7.52	.01
Between Tests	6.38	1	6.38		
Interaction	12.89	1	12.89	1.23	ns
Within Groups	1675.85	47	35.66		
Within Tests	491.23	47	10.45		
Total	2454.34	97			

No significant differences were shown between tests or interaction for the experimental and secondary control groups on the variable labeled Succorance. The F ratio of 7.52 between groups on Succorance for the primary and secondary control groups was significant at the .01 level of confidence with 1 and 47 degrees of freedom. No other significant findings were obtained between the primary and secondary control groups.

Nurturance (helping others)

Upon inspection of Table 30 it is apparent that no significant difference was obtained between groups for the experimental and primary control groups on the variable Nurturance. Neither is the F ratio for between tests significant. But the F ratio of 6.30 for interaction is significant at the .01 level for 1 and 54 degrees of freedom. The direction of change in Nurturance scores was different for the experimental group and the primary and secondary control groups. The experimental E's scores increased over time whereas the primary and secondary control E's scores decreased over time.

TABLE 30

Analysis of Variance Data for the Experimental and Primary Control Groups on the Variable Nurturance

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	93.76	1	93.76	3.44	NS
Between Tests	6.51	1	6.51	1.15	NS
Interaction	35.53	1	35.53	6.30	.01
Within Groups	1472.66	54	27.27		
Within Tests	304.46	54	5.64		
Total	1912.92	111			

TABLE 31

Analysis of Variance Data for the Experimental and Secondary Control Groups on the Variable Nurturance

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	123.79	1	123.79	3.22	NS
Between Tests	.34	1	.34		
Interaction	7.11	1	7.11	1.41	NS
Within Groups	1963.57	51	38.50		
Within Tests	256.55	51	5.03		
Total	2351.36	105			

The analysis of variance data presented in Table 32 points to significant differences for between groups and between tests. Between groups is significant at the .01 level with 1 and 47 degrees of freedom. This significance specifies the difference between the primary and secondary control groups on the variable Nurturance. In addition, the between tests F ratio of 6.38 is significant at the .05 level of confidence. No significant finding was obtained for the interaction.

TABLE 32

Analysis of Variance Data for
the Primary and Secondary Control Groups
on the Variable Nurturance

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	393.47	1	393.47	9.93	.01
Between Tests	30.87	1	30.87	6.38	.05
Interaction	8.99	1	8.99		
Within Groups	1861.53	47	39.61		
Within Tests	227.64	47	4.84		
Total	2522.30	97			

Dominance[2]

The analysis of the data for the variable Dominance[2], that variable assessed by the EPPS, is presented in Tables 33, 34, and 35. No significant findings were obtained on this variable between groups, between tests, or interaction. Insofar as this variable is concerned there are apparently no differences between the groups which comprised the total sample.

TABLE 33

Analysis of Variance Data for
the Experimental and Primary Control Groups
on the Variable Dominance[2]

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	127.39	1	127.39	3.85	NS
Between Tests	1.28	1	1.28		
Interaction	3.29	1	3.29		
Within Groups	1785.32	54	33.06		
Within Tests	351.43	54	6.51		
Total	2268.71	111			

TABLE 34

Analysis of Variance Data for
the Experimental and Secondary Control Groups
on the Variable Dominance[2]

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	8.07	1	8.07		
Between Tests	3.78	1	3.78		
Interaction	.83	1	.83		
Within Groups	2320.31	51	45.50		
Within Tests	471.39	51	9.24		
Total	2804.38	105			

TABLE 35

Analysis of Variance Data for
the Primary and Secondary Control Groups
on the Variable Dominance[2]

Source	Sum of Squares	df	Mean Square	F Ratio	P
Between Groups	61.09	1	61.09	1.15	NS
Between Tests	.00	1	.00		
Interaction	.64	1	.64		
Within Groups	2500.83	47	53.21		
Within Tests	271.36	47	5.77		
Total	2833.92	97			

Summary

Each of the factors considered in this study and discussed in this chapter was subjected to statistical interpretation. Based on the findings from the treatment of the data and within the limits of the sample the following conclusions are made.

1. The experimental and primary control groups differed from the secondary control group on the variables of (a) Cyclothymia, (b) Affiliation, (c) Intraception, and (d) Ingocorance.
2. The experimental and secondary control groups differed from the primary control group on Confident-Adequacy.

3. The experimental group differed from the primary and secondary control groups on Protension.
4. The experimental group differed from the primary control group on Dominance[1], as measured by the 16 PFQ, but not on Dominance[2], as measured by the EPPS.
5. The primary control group differed from the secondary control group on Nurturance.
6. No differences were obtained for the variables Exhibition, Dominance[2], and Self-Sentiment Formation.
7. A between tests difference was obtained between the experimental and secondary control groups and the primary control group on Exhibition.
8. A significant F ratio was obtained for interaction on the variable Intraception between the experimental group and the primary and secondary control groups.
9. The experimental and primary control groups obtained a significant F ratio for interaction on Nurturance.
10. A significant F ratio for interaction was obtained for interaction on Cyclothymia between the experimental and secondary control groups and between the primary and secondary control groups.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

The specific purpose of the study was to investigate the changes in certain personality variables of counselors in training. Three components form the foundation for this study: (a) the participation of the author in an intensive summer program of counselor education conducted under the National Defense Education Act authority, (b) the observation of, and work with, an academic year program during 1960-1961, and (c) the small amount of research directed toward this aspect of counselor education.

With this background the study was designed and conducted with the cooperation of the Department of Personnel Services, University of Florida and the enrollees in the 1961-1962 Academic Year Counseling and Guidance Institute. The study was designed to determine if certain personality variables assumed to be related to qualities which seem to be desirable in counselors would be significantly affected by the counselor education program. These qualities are warmth, empathy, acceptance, and understanding.

Factors in the counselor education program which would seem to contribute to changes or modification of personality variables in the enrollees are (a) the philosophical orientation of the staff, (b) the emphasis on perceptual psychology, and (c) the attention directed toward self-discovery and understanding. Under these conditions the following hypotheses were formulated.

1. Enrollees in an intensive counselor training program will change in certain personality variables. Changes which occur will be shown by the responses on the Edwards Personal Preference Schedule and the Sixteen Personality Factor Questionnaire.

   a. Positive movement is expected in the factors Affiliation, Intraception, Nurturance, Cyclothymia, Confident-Adequacy, and Self-Sentiment Formation.

   b. Negative movement will be expected in the areas of Exhibition, Succorance, Dominance, and Protension.

An examination of the literature produced a number of studies relevant to counselor traits and characteristics but few studies were found directed toward changes in counselor trainees. At the same time it seems that many authors are concerned with the personality of the counselor (4;34;43).

The study was designed to employ the statistical technique analysis of variance for treatment of the data. Differences were considered to be significant when the F ratio was sufficiently large to reach or exceed the value

required for the .05 level of confidence. Pre- and post-test scores, on the instruments mentioned above, of the seventy-nine participants formed the data treated in this manner. Three groups comprising the total sample were (a) the experimental group, (b) the primary control group, and (c) the secondary control group. The experimental group consisted of the enrollees in an NDEA Counseling and Guidance Institute; the primary control was counselors and teachers on the job in several Florida counties; the secondary control group was graduate students in colleges other than education at the University of Florida.

Conclusions

Each of the factors initially considered in the hypotheses was subjected to statistical treatment and interpretation. The statistical treatment permitted F ratios for (a) between groups, (b) between tests (without regard to groups), and (c) interaction. The interaction F ratio provided the support or non-support of the hypotheses. Between groups and between tests F ratios contributed additional information which was not relevant to the basic purpose of the study. On the basis of the findings obtained by the treatment of the data and within the limits of the sample the following conclusions appear warranted.

1. The variables Cyclothymia, Intraception, and Nurturance demonstrated significant F ratios for interaction. On these factors the hypotheses was supported. But it must be admitted that the findings on Cyclothymia and Nurturance are not as significant as that for Intraception.
2. A number of statistically significant differences was found between groups. This would seem to indicate that professional people in education differ from individuals in certain other professional fields of endeavor.

It is interesting to note that the means for the experimental group, though not necessarily statistically significant, showed movement as hypothesized on eight of the variables. But on three variables the experimental group seems demonstrated movement opposite to that direction hypothesized. It may be said that the hypothesis was partially supported when the data was treated statistically. And, further, that movement in the specified direction occurred would seem to indicate that changes may be occurring in counselor trainees during the education period.

At the same time it is also recognized that part of the hypotheses was probably incorrect. This is especially possible in the areas of Self-Sentiment Formation and

Exhibition. These two variables may be affected by the program in such a way as to depress the responses on the two instruments. To be more explicit, as the individual examines himself during the program and reconsiders his behavior it might well be that his previously consistent pattern of behavior is modified and his responses to the items on Self-Sentiment Formation would be inconsistent. This then would alter the scores whether behavior was truly modified or only in a state of flux during the post-testing period.

In a somewhat similar fashion the hypothesis for the variable Exhibition might have been in error. It could very possibly be that during the initial stages of the counselor education program that enrollees feel more adequate as a counselor and wish to express their competence. And the items for Exhibition permit some expression of this feeling thereby indicating an increase in the need for Exhibition.

One final conclusion, not based on the statistical treatment of the data, concerns the instruments used in the study. This conclusion is based on observation of the enrollees and some clinical material. It appears that one of the primary problems of researchers in this area is that of instrument sensitivity. An unanswered question,

in the mind of the researcher, ie whether the changes which occurred in the individuals were fully represented by the responses or whether other changes were of such slight intensity that they were not measured. This question must remain unanswered for the present time.

Implications

The results of the study raise a number of questions which seem worthy of consideration. First, for future studies what kind of instrument should be used? Second, do counselors possess certain personality characteristics which may be defined as a "constellation of counselor characteristics" which is different from the general population and from teachers in general? And third, what effects do the various philosophical orientations of counselor education departments exercise on the personality of the individual students?

Within the confines of the present study it appears that those variables measured by the EPPS produced more significant F ratios than those measured by the 16 PFQ. Apparently, the variables measured by the 16 PFQ are less susceptible to change than those measured by the EPPS. Or, as suspected, the degree of need expressed by an individual is more likely to fluctuate on a day-to-day basis than the behavior measured by the 16 PFQ. Therefore, it seems that

the use of instruments similar to the 16 PFQ in design for studies of personality change and in the determination of occupational profiles derived from personality characteristics is not only justified but desirable.

Studies by other researchers (24;28) have shown that teachers and counselors differ on manifest needs as posited by Murray (33) and measured by the EPPS. The present study implies that significant differences are present between people in education and those not in education. It is felt that further studies will tend to support the thesis that a counselor profile exists. The determination of the "counselor constellation" or profile possibly will have to wait for the development of an instrument which will further differentiate the personality variables possessed by effective counselors.

The effects of various philosophical orientations on the personality of counselor trainees is a problem that should be pursued by several institutions simultaneously. This aspect must be accompanied by an effort to determine the effects of the basic orientation of the staff on the students. It is possible that these factors exert little effect on counselor trainees but at the same time it is conceivable that long term effects might alter the counselors' perception of himself in such a manner as to affect his effectiveness in the counseling relationship.

With these thoughts in mind it appears that the basic implication of this study is that of the need for further research in the area. Using previous studies as the foundation it seems that efforts should be directed toward personality change in counselor education. Consideration should be given to the construction of an instrument which would assess personality variables in a relatively comprehensive manner. Two studies which could contribute much to the profession of counseling are (a) a comparative study of the effects of the prevalent philosophy in several institutions and predicted counselor effectiveness, and (b) a cooperative project by several institutions directed toward the determination of personality change in counselor trainees. The problems associated with studies of this kind are recognized but it is not felt that they are insurmountable.

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BIOGRAPHICAL SKETCH

Fred D. Malt was born April 7, 1923, in Canton, Mississippi. He attended public schools in Alabama and was graduated from high school in Brewton, Alabama.

During World War II he served with the United States Army and subsequently served as an escort with an Army Escort Detachment, Atlanta General Depot, Atlanta, Georgia. Following his release from this duty he entered the Alabama Polytechnic Institute (now Auburn University), and was graduated in 1951 with a degree in Agricultural Education.

From 1951 to 1953 he was employed as a teacher of agriculture in the high school at LaFayette, Georgia. He served as principal in one of the elementary schools of the county prior to joining the Georgia Agricultural Extension Service as an Assistant County Agent.

In 1958 he received an M. Ed. degree from the University of Buffalo, Buffalo, New York. He worked as a principal in Gordon County, Georgia, and later as a principal and a counselor in schools of Walker County, Georgia.

He entered the University of Florida in 1960 to work on an advanced degree in Personnel Services. During

this time he was a graduate assistant with the National Defense Education Act Counseling and Guidance Institutes, in the Department of Personnel Services. He is a member of Phi Delta Kappa, Kappa Delta Pi, the American Personnel and Guidance Association, and the American College Personnel Association.

He is married to the former Eileen I. Hofmeier of Alden, New York, and they have two daughters, Linda and Carol.

This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Education and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Education.

August 11, 1962

J B White
Dean, College of Education

Dean, Graduate School

Supervisory Committee:

Chairman